



12FM6

## TWIN DIODE—MEDIUM-MU TRIODE

7-PIN MINIATURE TYPE

*For use in automobile radio receivers operating directly from 6-cell storage-battery systems*

12FM6

### GENERAL DATA

#### Electrical:

Heater, for Unipotential Cathode:

Voltage range (AC or DC). . . . . 10 to 15.9 volts

*This voltage range is on an absolute basis. For longest life, it is recommended that the heater be operated within the voltage range of 11 to 14 volts.*

Current (Approx.)

at 12.6 volts . . . . . 0.15 amp

Direct Interelectrode Capacitances

(Approx.):<sup>o</sup>

Triode grid to triode plate . . . . . 1.7  $\mu\text{f}$

Triode grid to cathode and heater . . . . . 2.7  $\mu\text{f}$

Triode plate to cathode and heater. . . . . 1.7  $\mu\text{f}$

Diode-No.1 plate to diode-No.2 plate. . . . . 1.1  $\mu\text{f}$

#### Characteristics, Class A<sub>1</sub> Amplifier (Triode Unit):

Heater Voltage. . . . . 12.6 12.6 volts

Plate Voltage . . . . . 12.6 12.6 volts

Grid Voltage. . . . . 0 — volts

Grid Resistor (Bypassed). . . . . 0 2.2 megohms

Amplification Factor. . . . . 13.5 10

Plate Resistance (Approx.). . . . . 5600 7700 ohms

Transconductance. . . . . 2400 1300  $\mu\text{mhos}$

Plate Current . . . . . 1.8 1 ma

#### Mechanical:

Operating Position. . . . . Any

Maximum Overall Length. . . . . 2-1/8"

Maximum Seated Length . . . . . 1-7/8"

Length, Base Seat to Bulb Top (Excluding tip) 1-1/2"  $\pm$  3/32"

Diameter. . . . . 0.650" to 0.750"

Dimensional Outline . . . . . See General Section

Bulb. . . . . T5-1/2

Base. . . . . Small-Button Miniature 7-Pin (JEDEC No. E7-1)

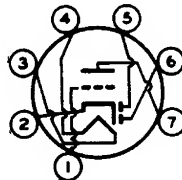
Basing Designation for BOTTOM VIEW. . . . . 7BT

Pin 1—Triode Grid

Pin 2—Cathode

Pin 3—Heater

Pin 4—Heater



Pin 5—Diode-No.2

Plate

Pin 6—Diode-No.1

Plate

Pin 7—Triode Plate

<sup>o</sup> Without external shield.

12FM6



12FM6

## TWIN DIODE—MEDIUM-MU TRIODE

TRIODE UNIT — AMPLIFIER — Class A<sub>1</sub>

## Maximum Ratings, Design-Center Values:

|                                          |         |       |
|------------------------------------------|---------|-------|
| PLATE VOLTAGE. . . . .                   | 30 max. | volts |
| CATHODE CURRENT. . . . .                 | 20 max. | ma    |
| PEAK HEATER-CATHODE VOLTAGE:             |         |       |
| Heater negative with respect to cathode. | 30 max. | volts |
| Heater positive with respect to cathode. | 30 max. | volts |

## Maximum Circuit Values:

|                                  |         |         |
|----------------------------------|---------|---------|
| Grid-Circuit Resistance. . . . . | 10 max. | megohms |
|----------------------------------|---------|---------|

## DIODE UNITS — Two

Values are for Each Unit

## Maximum Ratings, Design-Center Values:

|                        |        |    |
|------------------------|--------|----|
| PLATE CURRENT. . . . . | 1 max. | ma |
|------------------------|--------|----|

## Characteristics:

|                                            |      |       |
|--------------------------------------------|------|-------|
| Heater Voltage . . . . .                   | 12.6 | volts |
| Plate Current for plate volts = 10 . . . . | 2    | ma    |